

➤ General Description

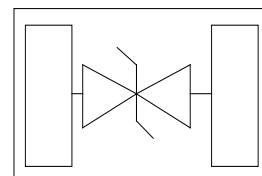
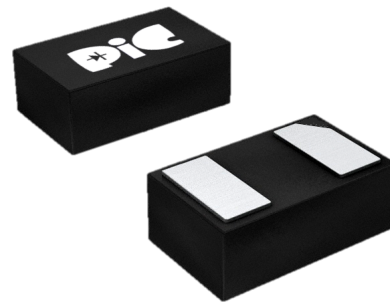
The PAE1821VEU designed with Weipan Punch-Through process TVS technology to protect voltage sensitive components from ESD. Excellent clamping capability, low leakage, and fast response time provide best in class protection on designs that are exposed to ESD. Because of its small size, it is suited for use in cellular phones, MP3 players, digital cameras and many other portable applications where board space comes at a premium..

This series has been specifically designed to protect sensitive components which are connected to data and transmission lines from overvoltage caused by ESD (electrostatic discharge), and EFT (electrical fast transients).

➤ Feature

- Peak Power Dissipation –35W (8 x 20 us Waveform)
- Low Capacitance
- Stand-off Voltage: 18 V
- Low capacitance for high-speed interfaces
- Replacement for MLV (0402)
- Protects I/O、VCC Port
- Low Clamping Voltage
- Low Leakage
- Response Time is < 1 ns
- Meets MSL 1 Requirements
- ROHS compliant

➤ DFN-1006



➤ Application

- Serial and Parallel Ports
- Notebooks, Desktops, Servers
- Projection TV
- Cellular handsets and accessories
- Portable instrumentation
- Peripherals

➤ Protection solution to meet

- IEC61000-4-2 (ESD) ±10kV (air), ±8kV (contact)
- IEC61000-4-4 (EFT) 40A (5/50ns)
- IEC61000-4-5 (Lightning) 1.5A (8/20μs)

➤ Maximum Ratings (TA=25°C Unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (tp=8/20μs waveform)	PPPP	35	Watts
ESD Rating per IEC61000-4-2:	Contact	8	KV
	Air	10	
Lead Soldering Temperature	TL	260 (10 sec.)	°C
Operating Temperature Range	TJ	-55 ~ 150	°C
Storage Temperature Range	TSTG	-55 ~ 150	°C

Maximum ratings are those values beyond which device damage can occur. Maximum ratings applied to the device are individual stress limit values (not normal operating conditions) and are not valid simultaneously. If these limits are exceeded, device functional operation is not implied, damage may occur and reliability may be affected.

*Other voltages may be available upon request.

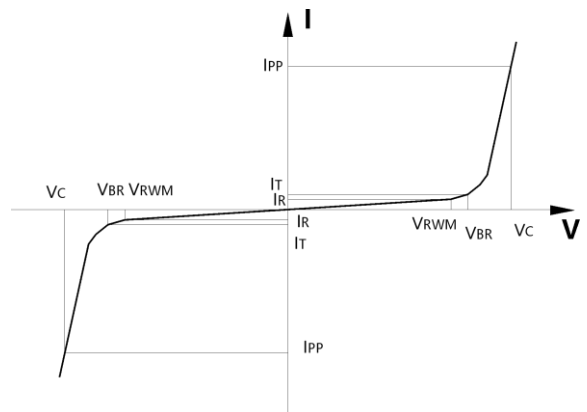
1. Non-repetitive current pulse, per Figure 1.

➤ Electrical Characteristics (TA=25°C Unless otherwise specified)

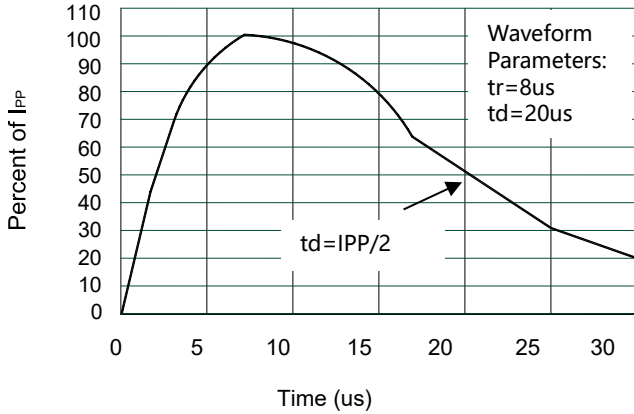
Symbol	Parameter	Conditions	Min.	Typ.	Max.	Units
V _{RWM}	Reverse Working Voltage				18	V
V _{BR}	Reverse Breakdown Voltage	I _T = 1mA,	20	24		V
I _R	Reverse Leakage Current	V _{RWM} = 18V,		0.01	1	μA
V _C	Clamping Voltage	I _{PP} = 1A, tp = 8/20μs,		32		V
C _J	Junction Capacitance	V _R = 0V, f = 1MHz,		0.19	0.3	pF

Junction capacitance is measured in V_R=0V, F=1MHz

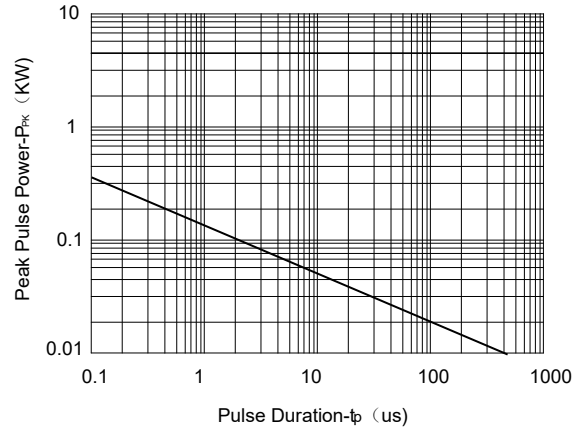
Symbol	Parameter
V _{RWM}	Working Peak Reverse Voltage
V _{BR}	Breakdown Voltage @ I _T
V _C	Clamping Voltage @ I _{PP}
I _T	Test Current
I _{RM}	Leakage current at V _{RWM}
I _{PP}	Peak pulse current
C _O	Off-state Capacitance
C _J	Junction Capacitance



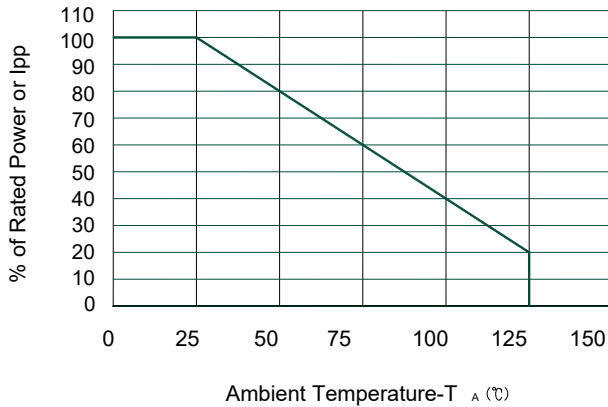
➤ Typical Characteristics



Pulse Waveform



Non-Repetitive Peak Pulse Power vs. Pulse Time



Power Derating Curve

➤ Ordering Information

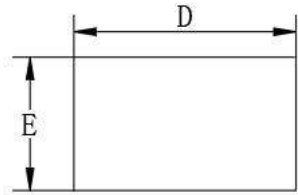
Part Number	Description	Quantity
PAE1821VEU	DFN1006 Reel	10000 pcs

➤ Package Information (DFN1006)

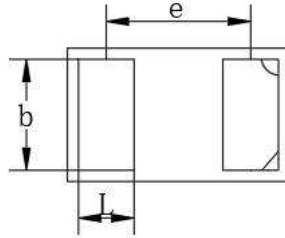
Mechanical Data

Case:DFN1006

Case Material: Molded Plastic. UL Flammability

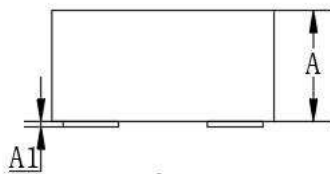


Top View



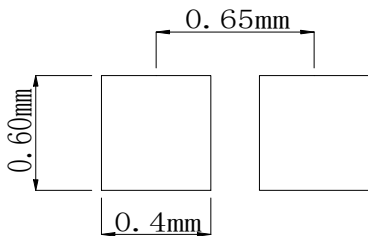
Bottom View

DIM	Millimeters	
	Min	Max
A	0.37	0.55
A1	0.00	0.05
D	0.95	1.05
E	0.48	0.65
b	0.35	0.55
e	0.65TYP	
L	0.15	0.35

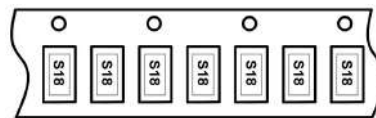


Side View

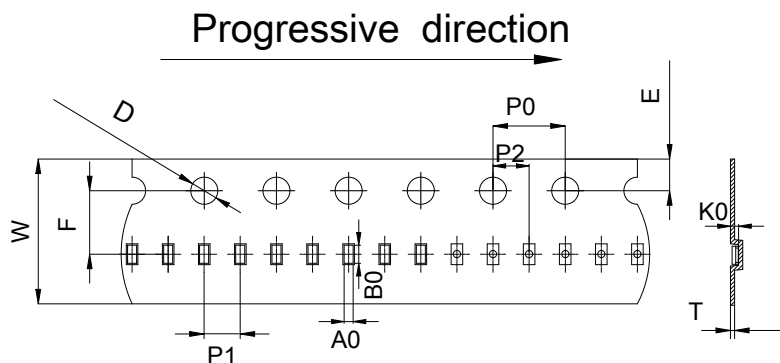
Recommended Pad outline



Device Orientation in Tape



DFN1006 Reel Dim



PACKAGE	W	E	F	P0	D	P2	P1	T	A0	B0	K0
DFN1006	8mm	1.75mm	3.5mm	4mm	1.5mm	2mm	2mm	0.23mm	0.67mm	1.2mm	0.55mm
	±0.1	±0.1	±0.05	±0.1	±0.1	±0.05	±0.1	±0.02	±0.05	±0.05	±0.05

DISCLAIMER

- The information in this document and any product described herein are subject to change without notice and should not be construed as a commitment by Paceleader, Paceleader reserve the right to make changes to the information in this document.
- Though Paceleader make effort to improve product quality and reliability, Product can malfunction and fail due to their inherent electrical sensitivity and vulnerability to physical stress, it is the responsibility of the customer, when utilizing Paceleader products, to comply with the standards of safety in making a safe design for entire system and to avoid situation in which a malfunction or failure., In developing a new designs, customer should ensure that the device which shown in this documents are used within specified operatingranges.
- The information contained herein is presented only as a guide for the applications of our products. No responsibility is assumed by Paceleader for any infringements of patents or other rights of the third parties which may result from its use.